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10.057,059	01.24.2002	Michael T. York	10541-1185	3379

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05.07.2003

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EXAMINER

PHAM, LEDA T

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 05.07.2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/057,059

Applicant(s)

YORK ET AL.

Examiner

Leda T. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s): _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This office action is in response to Amendment filed on 2/10/03.
2. Claims 1 – 24 are presented for examination, claim 6 has been cancelled, claim 25 consider for withdraw.

In view of amendment, the examiner withdraws the rejection under 35 USC 112.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 17, 19, and 21 - 22 are rejected under 35 U.S.C. 102(b) as being anticipated by T.L. Craige (U.S. Patent No. 2,949,591).

Referring to claim 1, Craige discloses a bobbin for use in an electrical machine comprising a bobbin having an expandable slit (6) extending completely across a section of the bobbin (figure 3).

Referring to claim 17, Craige discloses a bobbin assembly (figure 3) for use in an electrical machine, the assembly comprising a first end cap (3), a second end cap (4) a rigid sleeve (figure 4) having an expandable split (7) wherein the first end cap and second end cap are attached to the rigid sleeve and not unitarily formed with the sleeve.

Referring to claim 19, Craige discloses the bobbin assembly wherein the first end cap (3) has an expendable split and the second end cap has an expandable split (figure 3).

Referring to claim 21, Craige discloses the bobbin assembly wherein the first and second end caps are made from a polymer (nickel-iron alloy).

Referring to claim 22, Craige discloses the bobbin assembly wherein the rigid sleeve (5) is made of metal (lines 69 -70, column 3).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 3 - 5, 7 - 8, 10 - 16, 18, 23 - 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Craige in view of C. L. Shano (U.S. Patent No. 3,305,740).

Referring to claim 2, Craige discloses a rotor assembly for use in an electrical machine. the assembly comprising a bobbin assembly (figure 3) having a split extending completely axially and completely radially through a section of the bobbin assembly for allowing the bobbin to expand, an excitation winding (8) wrapped around the bobbin assembly. However, Craige fails to disclose the rotor assembly having a pole assembly for receiving the bobbin wrapped with the excitation winding.

Shano discloses a rotor assembly (figure 3) having a pole assembly for locking the bobbin and preventing relative movement.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify Craige's rotor assembly as taught by Shano. Doing so would lock the bobbin and prevent relative movement.

Referring to claim 3, Shano discloses the pole assembly (33, 34) includes a front pole section (34), and a rear pole (33), the pole assembly including an integrated hub (30, 31) for receiving the bobbin wrapped with the excitation winding.

Referring to claim 4, Craige discloses the bobbin assembly (36) is a single piece component (figure 3).

Referring to claim 5, Craige discloses a first end cap including the expandable split (6, figure 3), a second end cap including the expandable split (6, figure 3), and a rigid sleeve including the expandable split (7, figure 4), wherein the first and second end caps are attached to the rigid sleeve.

Referring to claim 7, Craige discloses the rotor assembly wherein the expandable splits on the first end cap, second end cap and rigid sleeve are aligned (figure 3, 4).

Referring to claim 8, Craige discloses the rotor assembly wherein the rigid sleeve is made from metal (lines 69 -70, column 3).

Referring to claim 10, Craige discloses the bobbin assembly wherein the first and second end caps are made from a polymer (nickel-iron alloy).

Referring to claim 11, Shano discloses the pole assembly (33, 34) includes a groove (65) that aligns with the expandable split of the bobbin assembly (36).

Referring to claim 12, Shano discloses the rotor assembly further comprising a shaft (26) that is received in a bore formed in the pole assembly (33, 34), and a slip ring assembly (37, 38) attached to the shaft (26) and in communication with the excitation winding (35).

Referring to claim 13, Shano discloses the bobbin (36) wrapped with the excitation winding (35) is press fit onto the hub (30, 31) of the pole assembly.

Referring to claim 14, Craige discloses the claimed invention except the bobbin assembly is made from a magnetic material nickel-iron alloy instead of steel. Since the compound of steel includes iron element, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to select magnetic material nickel-iron alloy instead of steel to be material of the bobbin assembly for ensuring high permeability. Thus, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Referring to claim 15, Craige discloses the rotor assembly further comprising an insulating layer (9) positioned between the bobbin assembly and the excitation winding (figure 5).

Referring to claim 16, Craige discloses the rotor assembly wherein the bobbin assembly is made from an injection-molded polymer (nickel-iron alloy).

Referring to claim 18, Craige discloses the claim invention, except for the added limitation of the pole assembly.

Shano discloses a rotor assembly (figure 3) having a pole assembly including a front pole piece (34), and a rear pole piece (33), the pole assembly including an integrated hub (30, 31) for

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receiving the bobbin wrapped with the excitation winding for locking the bobbin and preventing relative movement.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify Craige's rotor assembly as taught by Shano. Doing so would lock the bobbin and prevent relative movement.

Referring to claim 23, Shano teaches the pole assembly includes a groove (65) that aligns with the expandable split (63) of the rigid sleeve.

Referring to claim 24, Shano teaches the bobbin assembly (figure 3) wherein the bobbin (36) wrapped with the excitation winding (35) is press fit onto the hub (30, 31) of the pole assembly.

7. Claims 9, 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Craige and Shano as applied to claim 2 and claim 17 above, and further in view of Barzideh (U.S. Patent No. 5,943,760).

The combination of Craige and Shano substantially discloses the claimed invention except for the added limitation of the first and second end caps are constructed from a laminated structure.

Barzideh discloses in his invention that the first and second end caps (stator yokes 32, and 44) are constructed from a laminated structure (column 3, lines 23 – 27) to reduce the cost of bobbin assembly.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the caps of the bobbin assembly by laminated as taught by Barzideh. Doing so would reduce the cost of bobbin assembly.

Response to Arguments

8. Applicant's arguments with respect to claims 1 -24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leda T. Pham whose telephone number is (703) 305-4864. The examiner can normally be reached on M-F (7:30-5:00) first Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-9176 for regular communications and (703) 305-1341 for After Final communications.

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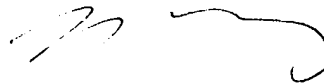
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3431.

Leda T. Pham
Examiner
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LTP
April 24, 2003

A handwritten signature in black ink, appearing to be 'LTP' followed by a stylized flourish.